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09/940,642	08/29/2001	Shinichi Kawate	35.C15728	5606

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EXAMINER	
PERRY, ANTHONY T	

ART UNIT	PAPER NUMBER
2879	

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/940,642	KAWATE ET AL.	
	Examiner	Art Unit	
	Anthony T Perry	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29 and 31-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-27,29-41,43,44 and 46-56* is/are rejected.

7)☒ Claim(s) *3,28,42 and 45* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9/10/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The Amendment filed on 3/17/04, has been entered and acknowledged by the Examiner.

Cancellation of claim 30 has been entered.

Claims 31-56 have been added.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 16, 20-21, 29, and 34-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Fumio et al. (JP 08-115652).

Regarding claim 16, Fig. 1b of the Fumio reference discloses an electron emitting device comprising a first electrode (2) and a second electrode (2') formed in opposition to each other with a gap between them on a substrate (1). A plurality of fibers (3) are electrically connected to the first electrode and comprise carbon (paragraph 0008). As shown in Fig. 1b the fibers (3) are on a surface of the first electrode (2) facing the second electrode (2').

Regarding claim 20, the recitation "wherein electrons are emitted by applying a voltage between said second electrode and said first electrode so that a potential of said second electrode is higher than that of the first electrode" has not been given patentable weight because it is considered an intended used recitation. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

Furthermore, the teachings of the Fumio reference cover the intended use recitation.

Regarding claim 21, Fig. 1b shows fibrous carbon (3) along the entire sidewall surface of the first electrode. The fibers located closest to the upper surface of the first electrode (2) are more distant from a surface of the substrate (1) than a bottom portion of the sidewall surface of the second electrode (2').

Regarding claim 29, Fig. 9 shows an electron source including a plurality of electron-emitting devices (54) arrayed on a substrate (1). The electron-emitting device (54 of Fig. 9) is shown in Fig. 1b of the Fumio reference, and comprises a first electrode (2) and a second electrode (2') formed in opposition to each other with a gap between them on a substrate (1). A plurality of fibers (3) are electrically connected to the first electrode and comprise carbon (paragraph 0008). As shown in Fig. 1b the fibers (3) are on a surface of the first electrode (2) facing the second electrode (2').

Regarding claim 34, the recitation "wherein electrons are emitted by applying a voltage between said second electrode and said first electrode so that a potential of said second electrode is higher than that of the first electrode" has not been given patentable weight because it is considered an intended used recitation. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

Furthermore, the teachings of the Fumio reference cover the intended use recitation.

Regarding claim 35, Fig. 1b shows fibrous carbon (3) along the entire sidewall surface of the first electrode. The fibers located closest to the upper surface of the first electrode (2) are more distant from a surface of the substrate (1) than a bottom portion of the sidewall surface of the second electrode (2').

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be firstd by the manner in which the invention was made.

Claims 17-19 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fumio et al. (JP 08-115652).

Regarding claims 17-19 and 31-33, Fumio does not specifically what type of carbon fibers (single graphen, plurality of graphens, etc.) are used. However, various types of carbon fibers suitable for use as emitters, including a plurality of graphens layered in an axis direction of the fiber, are well known in the art of electron-emitting devices. It is within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. Thus, it would have been obvious to one having ordinary skills in the art at the time the invention was made to have selected carbon fibers in the form of a plurality of graphens layered in the axis direction of the fibers, since the selection of known materials for a known purpose is within the skill of the art.

Claims 1-2, 4-27, 31-41, 43-44, and 46-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bandy et al. (US 5,610,471) in view of Den et al. (JP 11-194134).

Regarding claims 1, 16, and 23-24, Fig. 2 of the Bandy reference discloses an electron-emitting device comprising a first electrode (103) and a second electrode (104) formed in opposition to each other with a gap between them on an electrically-insulating substrate (105) (see col. 2, lines 56-57). However, Bandy does not specifically state the use of carbon fibers as emitters.

The use of carbon nanotubes as emitters in field emission devices is well known in the art. Carbon nanotubes are excellent emitters because of their small emitting areas and increased electron emission efficiency. Fig. 8b of the Den reference teaches a method of growing carbon nanotubes parallel to a substrate. The method uses a first layer (22) having a conductive front face of an oxide of Ti (see paragraph 0074) formed on a surface of an electrode (81) between the electrode (81) and the carbon fibers (24). The fibrous carbon (24) is grown from a catalyst particle (23) disposed on a sidewall surface of the first layer (22) facing the side of a second electrode (82). Accordingly, one of ordinary skill in the art, at the time the invention was made, would have found it obvious to use the method, taught by Den, of growing carbon nanotubes parallel to a substrate on which they are formed replacing the edge emitters of the first electrode (103) taught by the Bandy reference, in order to increase the electron emission efficiency of the lateral FED. Nanotube emitters are also preferred to edge emitters because they have the same diameter throughout their length, so that if the ends of the emitters is damaged or broken off, the emitter site will be the same size as before, and the electron emission efficiency of the emitters will be unaffected. If the tips of the edge emitters taught by Bandy are broken, the emitter site will increase resulting in a device having a poor electron-emitting efficiency.

Regarding claims 2 and 27, Fig. 8 of the Den reference teaches only the sidewall surface of the first layer (22) facing the side of the second electrode (82) being exposed and the other surfaces thereof covered with a second layer (83) on which fibrous carbon (24) does not grow as compared with said first layer (22).

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claim 4, Den teaches the fibrous carbon (24) being a carbon nanotube (see paragraph 0134).

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claims 5-7 and 17-19, Den does not specify what type of carbon nanotube is used. However, "nanotube" is a generic term used for all types of nanotubes, including a nanotube that comprises a plurality of graphens layered in an axis direction of the fibrous carbon. Various types of carbon fibers suitable for use as emitters, including a plurality of graphens layered in an axis direction of the fiber, are well known in the art of electron-emitting devices. It is within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. Thus, it would have been obvious to one having ordinary skills in the art at the time the invention was made to have selected carbon fibers in the form of a plurality of graphens layered in the axis direction of the fibers, since the selection of known materials for a known purpose is within the skill of the art.

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claims 8 and 25, Den teaches a catalyst particle (23) consisting of Ni (see paragraph 0062).

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claims 9 and 21, Fig. 8 shows the nanotube (24) being grown parallel to the substrate at a height more distant from a surface of the substrate (80) than a position of a surface of the second electrode (82). Therefor, the electron emission position (the end tip of the nanotube) of the combined invention will be more distant from a surface of the substrate than a surface of the second electrode.

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claims 10 and 22, Fig. 8 shows the second electrode (82) and the first electrode (81) are formed on a surface of substantially planar shape of the substrate (80) with the thickness of the first electrode (81) being larger than a thickness of the second electrode (82).

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claim 11, it is noted that the applicant's specific limitation of the substrate being thicker in a region where the first electrode is formed, does not solve any of the stated problems or yield any unexpected result that is not within the scope of the teachings applied. Den teaches the first electrode being thicker than the second electrode. One of ordinary skill in the art would have found it obvious to have the electrodes of the combined device in such a matter so that the carbon nanotubes are located at a sidewall of the first electrode at a height above the top surface of the second electrode so that the second electrode does not absorb the emitted electrons. It is considered to be a matter of choice, which a person of ordinary skill in the art would have found obvious to select any method of ensuring the height of the carbon nanotubes is greater than the second electrode, including having a thicker cathode electrode, increasing the thickness of the substrate at a position of the first electrode, forming the first electrode on top of an insulating layer, etc.

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claim 12, Fig. 8b of the Den reference shows the first layer (22) on the first electrode (81) inside of the gap between the second electrode (82) and the first electrode (81) on a surface of the substrate (80).

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claims 13-14 and 29, the Bandy and Den references do not specifically teach the electron-emitting devices arrayed and connected to a matrix-wiring pattern. However, it is well known in the art to array such electron-emitting devices and to electrically connect them through the use of a matrix-wiring pattern so that each of the devices can be selected and driven to operate independently by means of a simple matrix wire arrangement instead of a complex wiring system having separate wires for each device. Accordingly, one of ordinary skill in the art at the time of the invention would have found it obvious to use such a matrix-wiring pattern in order to simplify the wiring step of an electron source.

Rejection of claims 1, 16, and 23-24, above, applies.

Regarding claim 15, Bandy teaches that the electron-emitting device used as the discharge element for an image-forming apparatus which inherently comprises a fluorescent member. The image-forming member of such an image-forming apparatus for forming an image by collision of emitted electrons is inherently disposed at a position facing the electron source.

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claim 20, the recitation "wherein electrons are emitted by applying a voltage between said second electrode and said first electrode so that a potential of said second electrode is higher than that of the first electrode" has not been given patentable weight because it is considered an intended used recitation. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

Furthermore, the teachings of the Bandy reference cover the intended use recitation.

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claim 26, the Den reference teaches that the first layer is electrically conductive (see paragraph 0074).

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claims 31-33, Den does not specify what type of carbon nanotube is used. However, "nanotube" is a generic term used for all types of nanotubes, including a nanotube that comprises a plurality of graphens layered in an axis direction of the fibrous carbon. Various types of carbon fibers suitable for use as emitters, including a plurality of graphens layered in an axis direction of the fiber, are well known in the art of electron-emitting devices. It is within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. Thus, it would have been obvious to one having ordinary skills in the art at the time the invention was made to have selected carbon fibers in the form of a plurality of graphens layered in the axis direction of the fibers, since the selection of known materials for a known purpose is within the skill of the art.

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claim 34, the recitation "wherein electrons are emitted by applying a voltage between said second electrode and said first electrode so that a potential of said second electrode is higher than that of the first electrode" has not been given patentable weight because it is considered an intended used recitation. It has been held that a recitation with respect to the

manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

Furthermore, the teachings of the Bandy reference cover the intended use recitation.

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claim 35, Fig. 8 shows the second electrode (82) and the first electrode (81) are formed on a surface of substantially planar shape of the substrate (80) with the thickness of the first electrode (81) being larger than a thickness of the second electrode (82).

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claim 36, it is noted that the applicant's specific limitation of the substrate being thicker in a region where the first electrode is formed, does not solve any of the stated problems or yield any unexpected result that is not within the scope of the teachings applied. Den teaches the first electrode being thicker than the second electrode. One of ordinary skill in the art would have found it obvious to have the electrodes of the combined device in such a matter so that the carbon nanotubes are located at a sidewall of the first electrode at a height above the top surface of the second electrode so that the second electrode does not absorb the emitted electrons. It is considered to be a matter of choice, which a person of ordinary skill in the art would have found obvious to select any method of ensuring the height of the carbon nanotubes is greater than the second electrode, including having a thicker cathode electrode, increasing the thickness of the substrate at a position of the first electrode, forming the first electrode on top of an insulating layer, etc.

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claims 37-38, Fig. 8b of the Den reference teaches a method of growing carbon nanotubes parallel to a substrate. The method uses a first layer (22) having a conductive front face of an oxide of Ti (see paragraph 0074) formed on a surface of an electrode (81) between the electrode (81) and the carbon fibers (24). The fibrous carbon (24) is grown from a catalyst particle (23) disposed on a sidewall surface of the first layer (22) facing the side of a second electrode (82) (see above rejection of claims 1, 16, and 23-24).

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claim 39, Den teaches a catalyst particle (23) consisting of Ni (see paragraph 0062).

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claim 40, the Den reference teaches that the first layer is electrically conductive (see paragraph 0074).

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claim 41, Fig. 8 of the Den reference teaches only the sidewall surface of the first layer (22) facing the side of the second electrode (82) being exposed and the other surfaces thereof covered with a second layer (83) on which fibrous carbon (24) does not grow as compared with said first layer (22).

Regarding claim 43, Bandy teaches that the electron-emitting device used as the discharge element for an image-forming apparatus which inherently comprises a fluorescent member. The image-forming member of such an image-forming apparatus for forming an

image by collision of emitted electrons is inherently disposed at a position facing the electron source. Rejection of claim 29, above, applies.

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claim 44, Fig. 8 of the Den reference teaches only the sidewall surface of the first layer (22) facing the side of the second electrode (82) being exposed and the other surfaces thereof covered with a second layer (83) on which fibrous carbon (24) does not grow as compared with said first layer (22).

Regarding claims 46-49, Den does not specify what type of carbon nanotube is used. However, "nanotube" is a generic term used for all types of nanotubes, including a nanotube that comprises a plurality of graphens layered in an axis direction of the fibrous carbon. Various types of carbon fibers suitable for use as emitters, including a plurality of graphens layered in an axis direction of the fiber, are well known in the art of electron-emitting devices. It is within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. Thus, it would have been obvious to one having ordinary skills in the art at the time the invention was made to have selected carbon fibers in the form of a plurality of graphens layered in the axis direction of the fibers, since the selection of known materials for a known purpose is within the skill of the art.

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claim 50, Den teaches a catalyst particle (23) consisting of Ni (see paragraph 0062).

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claim 51, Fig. 8 shows the nanotube (24) being grown parallel to the substrate at a height more distant from a surface of the substrate (80) than a position of a surface of the second electrode (82). Therefor, the electron emission position (the end tip of the nanotube) of the combined invention will be more distant from a surface of the substrate than a surface of the second electrode.

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claim 52, Fig. 8 shows the second electrode (82) and the first electrode (81) are formed on a surface of substantially planar shape of the substrate (80) with the thickness of the first electrode (81) being larger than a thickness of the second electrode (82).

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claim 53, it is noted that the applicant's specific limitation of the substrate being thicker in a region where the first electrode is formed, does not solve any of the stated problems or yield any unexpected result that is not within the scope of the teachings applied. Den teaches the first electrode being thicker than the second electrode. One of ordinary skill in the art would have found it obvious to have the electrodes of the combined device in such a matter so that the carbon nanotubes are located at a sidewall of the first electrode at a height above the top surface of the second electrode so that the second electrode does not absorb the emitted electrons. It is considered to be a matter of choice, which a person of ordinary skill in the art would have found obvious to select any method of ensuring the height of the carbon nanotubes is greater than the second electrode, including having a thicker cathode electrode, increasing the thickness of the substrate at a position of the first electrode, forming the first electrode on top of an insulating layer, etc.

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claim 54, Fig. 8 of the Den reference shows the first layer (22) formed from on the first electrode (81) to inside the gap between the second electrode (82) and first electrode (81) on a surface of the insulating substrate (80).

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Regarding claim 55, the Bandy and Den references do not specifically teach the electron-emitting devices arrayed and connected to a matrix-wiring pattern. However, it is well known in the art to array such electron-emitting devices and to electrically connect them through the use of a matrix-wiring pattern so that each of the devices can be selected and driven to operate independently by means of a simple matrix wire arrangement instead of a complex wiring system having separate wires for each device. Accordingly, one of ordinary skill in the art at the time of the invention would have found it obvious to use such a matrix-wiring pattern in order to simplify the wiring step of an electron source.

Rejection of claim 44, above, applies.

Regarding claim 56, Bandy teaches that the electron-emitting device used as the discharge element for an image-forming apparatus which inherently comprises a fluorescent member. The image-forming member of such an image-forming apparatus for forming an image by collision of emitted electrons is inherently disposed at a position facing the electron source.

Reasoning for combination given in the rejection of claims 1, 16, and 23-24, above, applies.

Allowable Subject Matter

Claims 3, 28, 42, and 45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Regarding claims 3 and 28, the prior art does not teach the material covering the first layer being one of Ta, Cr, Au, Ag, Pt, or of the material making up the catalyst particle.

Other Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chen et al. (US 6,471,936) teaches different types of nanotube structures; Kikuchi et al. (EP 0,758,028 B1) teaches selective nanotube growth where nanotubes are grown only on side surfaces of a layer of cobalt due to a layer of quartz covering the top surface; and Yoshioka et al. (US 5,066,883) teaches a sidewall emitter.

Response to Arguments

Applicant's arguments, see amendment, filed 1/12/04, with respect to the rejection(s)of claim(s) 1-29 have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection has been made.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is **(571) 272-2459**. The examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-24597. **The fax phone number for this Group is (703) 872-9306.**

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [Anthony.perry@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Anthony Perry
Patent Examiner
Art Unit 2879
May 14, 2004

Vip Patel
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